

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
6 January 2005 (06.01.2005)

PCT

(10) International Publication Number  
**WO 2005/001448 A1**

(51) International Patent Classification<sup>7</sup>: G01N 21/64, C07D 221/04, C09B 23/12

(21) International Application Number:  
PCT/EP2004/006916

(22) International Filing Date: 25 June 2004 (25.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
03 014 601.3 26 June 2003 (26.06.2003) EP

(71) Applicant (for all designated States except US): MAX-  
PLANCK-GESELLSCHAFT ZUR FÖRDERUNG  
DER WISSENSCHAFTEN E.V. [DE/DE]; Hofgartenstr.  
8, 80539 München (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): KUHN, Bernd  
[DE/DE]; Perhamer Str. 7, 80687 München (DE). DENK,  
Winfried [DE/DE]; Wilckens Str. 39, 69120 Heidelberg  
(DE). HÜBENER, Gerd [DE/DE]; Johann-Strauss-Weg  
8, 81927 München (DE). FROMHERZ, Peter [DE/DE];  
Berchemstr. 97, 80696 München (DE).

(74) Agent: WEICKMANN & WEICKMANN; P.O. Box 860  
820, 81635 München (DE).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: OPTIMIZED DETERMINATION OF VOLTAGE CHANGES USING A VOLTAGE-SENSITIVE DYE

(57) Abstract: The present invention relates to a method of determining voltage changes, e.g. in cell membranes, by means of a  
voltage-sensitive dye.

WO 2005/001448 A1